



HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

**POWER OF ATTORNEY OR  
AUTHORIZATION OF AGENT AND  
CORRESPONDENCE ADDRESS**

Application Number	10/668,668
Filing Date	September 23, 2003
First Named Inventor	Anacleto M. de Figueroa
Confirmation Number	Not yet assigned
Group Art Unit	Not yet assigned
Examiner Name	Not yet assigned
Attorney Docket Number	1021.2003-001

Title ALLOY SUBSTANTIALLY FREE OF DENDRITES AND METHOD OF FORMING THE SAME

I/We hereby appoint

☒ the attorneys/agents associated with **Customer No. 021005**

☐ Practitioner(s) named below:

as my/our attorneys/agents to prosecute the application identified above, including any continuation or divisional applications thereof, and to transact all business in the United States Patent and Trademark Office connected therewith.

The correspondence address for the above-identified application is:

☒ Customer Number 021005

Hamilton, Brook, Smith & Reynolds, P.C.

530 Virginia Road

P.O. Box 9133

Concord, Massachusetts 01742-9133

☐ Other

Please direct all telephone calls and facsimiles to:

Name Robert T. Conway, Esq. Tel. No. 978-341-0036 Fax No. 978-341-0136

I am the:

☐ Applicant/Inventor.

☒ Authorized representative of the Assignee, Worcester Polytechnic Institute, of the entire interest. See 37 C.F.R. § 3.71. A Statement under 37 C.F.R. § 3.73(b) is enclosed.

☐ Authorized representative of the Assignee, [ ], together with [ ], of the entire interest. A Statement under 37 C.F.R. § 3.73(b) is enclosed.

**SIGNATURE of Applicant or Assignee of Record**

Name & Title William W. Durgin, Associate Provost

Signature

*William W. Durgin*

Date

*11/10/03*



Docket No. 1021.2003-001

STATEMENT UNDER 37 C.F.R. § 3.73(b)

Applicant: Anacleto M. de Figueredo, Diran Apelian, Matt M. Findon and Nicholas Saddock

Application No.: 10/668,668 Filed: September 23, 2003

For: Alloy Substantially Free of Dendrites and Method of Forming the Same

Worcester Polytechnic Institute, a university  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☒ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☐ an assignee together with [ ] of the entire right, title and interest in the patent application identified above.

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of:

- A. ☒ An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Date: 11/10/03

Name: William W. Durgin

Title: Associate Provost

Signature: William W. Durgin

ODM A\MH ODM A\Manage;427691;1



**COPY**

Docket No. 1021.2003-001

Joint

ASSIGNMENT

WHEREAS, we, **Anacleto M. de Figueredo, Diran Apelian, Matt M. Findon and Nicholas Saddock**, have invented a certain improvement in **Alloy Substantially Free of Dendrites and Method of Forming the Same** described in an application for Letters Patent of the United States,

- ☐ the specification of which is being executed on even date herewith and is about to be filed in the United States Patent Office;
- ☒ the specification of which was filed on **September 23, 2003** as United States Application No. **10/668,668**;
- ☐ the specification of which is the United States National Stage of International Application No. **[PCT Appl'n No.]**, filed on **[PCT Filing Date]** **[OPTION]** and assigned United States Application No. **[ ]**;
- ☐ which was patented under United States Patent No. **[ ]** on **[ ]**.

WHEREAS, **Worcester Polytechnic Institute** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **Commonwealth of Massachusetts**, and having a usual place of business at **100 Institute Road, Worcester, Massachusetts 01609** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the

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execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_

*Anacleto M. de Figueredo*

**Anacleto M. de Figueredo**

State/Commonwealth

of

*Mass*

County of

*Middlesex*

Then personally appeared before me the above-named **Anacleto M. de Figueredo** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 12<sup>th</sup> day of November, 2003.

(SEAL)

*[Signature]*

Notary Public

(print name)

My Commission expires 1/17/2008

**NOTARY PUBLIC**  
MY COMMISSION EXPIRES 1/17/2008

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Inventor's Signature: \_\_\_\_\_

**Diran Apelian**

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Diran Apelian** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Inventor's Signature: \_\_\_\_\_

**Matt M. Findon**

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Matt M. Findon** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Inventor's Signature: \_\_\_\_\_  
**Nicholas Saddock**

State/Commonwealth \_\_\_\_\_  
of \_\_\_\_\_  
County of \_\_\_\_\_

Then personally appeared before me the above-named **Nicholas Saddock** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL) \_\_\_\_\_ Notary Public  
\_\_\_\_\_  
(print name)  
My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_



**COPY**

Docket No. 1021.2003-001

Joint

ASSIGNMENT

WHEREAS, we, **Anacleto M. de Figueredo, Diran Apelian, Matt M. Findon and Nicholas Saddock**, have invented a certain improvement in **Alloy Substantially Free of Dendrites and Method of Forming the Same** described in an application for Letters Patent of the United States,

- ☐ the specification of which is being executed on even date herewith and is about to be filed in the United States Patent Office;
- ☒ the specification of which was filed on **September 23, 2003** as United States Application No. **10/668,668**;
- ☐ the specification of which is the United States National Stage of International Application No. **[PCT Appl'n No.]**, filed on **[PCT Filing Date]** **[OPTION and assigned United States Application No. [ ]]**;
- ☐ which was patented under United States Patent No. **[ ]** on **[ ]**.

WHEREAS, **Worcester Polytechnic Institute** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **Commonwealth of Massachusetts**, and having a usual place of business at **100 Institute Road, Worcester, Massachusetts 01609** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the

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execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

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Inventor's Signature: \_\_\_\_\_

**Anacleto M. de Figueredo**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Anacleto M. de Figueredo** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Inventor's Signature: \_\_\_\_\_

Diran Apelian  
Diran Apelian

State/Commonwealth

of

County of

Massachusetts  
Worcester

Then personally appeared before me the above-named **Diran Apelian** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of November 7, 2003.

(SEAL)

Marcia E. Kwederis Notary Public  
MARCIA E. KWEDERIS (print name)  
My Commission expires 1 1 9 1 0 9

Marcia E. Kwederis  
Notary Public  
My Commission Expires  
January 9, 2009

Inventor's Signature: \_\_\_\_\_

Matt M. Findon

Matt M. Findon

State/Commonwealth

of

County of

Massachusetts  
Worcester

Then personally appeared before me the above-named **Matt M. Findon** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 7th day of November 7, 2003.

(SEAL)

Marcia E. Kwederis Notary Public  
MARCIA E. KWEDERIS (print name)  
My Commission expires 1 1 9 1 0 9

Marcia E. Kwederis  
Notary Public  
My Commission Expires  
January 9, 2009

Inventor's Signature: \_\_\_\_\_

**Nicholas Saddock**

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Nicholas Saddock** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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**COPY**

Docket No. 1021.2003-001

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- ☒ the specification of which was filed on **September 23, 2003** as United States Application No. **10/668,668**;
- ☐ the specification of which is the United States National Stage of International Application No. [PCT Appl'n No.], filed on [PCT Filing Date] [OPTION and assigned United States Application No. [ ]];
- ☐ which was patented under United States Patent No. [ ] on [ ].

WHEREAS, **Worcester Polytechnic Institute** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **Commonwealth of Massachusetts**, and having a usual place of business at **100 Institute Road, Worcester, Massachusetts 01609** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

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AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

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Inventor's Signature: \_\_\_\_\_

**Anacleto M. de Figueredo**

State/Commonwealth \_\_\_\_\_

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Anacleto M. de Figueredo** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Inventor's Signature: \_\_\_\_\_

**Diran Apelian**

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Diran Apelian** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Inventor's Signature: \_\_\_\_\_

**Matt M. Findon**

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

Then personally appeared before me the above-named **Matt M. Findon** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

(SEAL)

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

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Docket No. 1021.2003-001

Inventor's Signature: \_\_\_\_\_

*Nicholas Saddock*

Nicholas Saddock

State/Commonwealth

of Michigan

County of Washtenaw

Then personally appeared before me the above-named **Nicholas Saddock** and acknowledged that he/she executed the foregoing instrument as his/her free act and deed this 13<sup>th</sup> day of November, 2003.

(SEAL)

*Kenneth A. McCoy*

Notary Public

*Kenneth A. McCoy*

(print name)

My Commission expires 9 / 26 / 2007

**KENNETH MCCOY**  
Notary Public, Washtenaw Co., MI  
My Commission Expires 09-26-07